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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,721	08/01/2003	Vladek P. Kasperchik	100004803-2	2781

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EXAMINER

PURVIS, SUE A

ART UNIT	PAPER NUMBER
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1734

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/632,721

Applicant(s)

KASPERCHIK ET AL.

Examiner

Sue A. Purvis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-7 and 9-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-7 and 9-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Terminal Disclaimer

1. The terminal disclaimer filed on 22 February 2005 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US Patent Applications 10/439,797, 10/439,993, and 10/439,798, which is now US Patent No. 6,808,583, has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Objections

2. Claims 9-11 are objected to because of the following informalities: They depend from cancelled Claim 8. For examination purposes, the examiner will assume they depend from Claim 1. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3-6, 9-15, 17-20, 22-24, 29, 32-34, 36, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bloom et al. (US Patent No. 5,560,979) in view of Hashida et al. (US Patent No. 4,861,409).

Bloom discloses a method of applying an uncut transparent, protective overcoat (34) to a sheet (22) having a binary image formed thereon. The overcoat is a transparent

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durable layer (34) and the sheet (22) is preferably a transparent polyester (e.g. poly(ethylene terephthalate). (Col. 17, lines 30-34.) The method includes applying heat and pressure at nip (50) by means of rollers (46, 48) which include controls means for controlling the temperature and force with which they are driven, and thus the pressure. (Col. 18, lines 47-60.) Figure 7 shows the transfer operation with the donor web (38) having the transparent durable layer (34) being unrolled from a source roll (42) and taken up by a take-up roll (54) downstream. Tension control means is provided on the feed roll (42) and/or the take-up roll (54).

Although Bloom do not specifically disclose that the exterior surface of the roller base comprises a surface material resistant to adhering to the transparent coat film, it would have been obvious to one of ordinary skill in the art at the time of invention to have the surface of the roller (46) to be resistant to the, because Hashida, also drawn to film lamination apparatus, discloses that thermocompression bonding rolls used for laminating can be provided with or without a covering of fluorocarbon resin or like non-tacky substance. (Column 7, lines 36-45).

Regarding claims 3-6, heat is applied to the material by roller (36) which is on the carrier side. As described above, the pressure is applied by the roller pair (46, 48).

Regarding claims 9 and 10, as set forth above Hashida teaches using a fluorocarbon resin covering or like non-tacky substance.

Regarding claims 11, although neither of the references specifically disclose that the non-tacky substance may comprise silicone oil, the skilled artisan would have appreciated that silicone oil would have represented a form the non-tack substance taught by Hashida et al. motivated by the fact that silicone oil is a well known release coating utilized to render laminating rollers tack-resistant.

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Regarding applicant claims 12-14, Bloom disclose that the donor web (38) has a greater surface width and length relative to that of the sheet (22) such that only a subsection of the transfer side (32, 34) having a surface width and length equal to that exposed by the sheet (22) is adhered thereto and furthermore whereby heat and pressure are only applied by controlled to a subsection of the donor web (38) in an area equivalent to the sheet (22) area. (Figure 5; Column 18, lines 18-44.)

Regarding claim 15, the base includes a roller (48).

Regarding claim 17, the transfer side of the donor web in Bloom also includes an adhesive layer (32) and a release layer (36). (Col. 18, lines 28-32.)

Regarding applicant claims 18-20, in Bloom, the durable layer (34) is preferably formed with acrylic polymers, for example poly(methyl methacrylate), polystyrenes and polyurethanes. (Column 10, lines 53-56.) These materials are resistant to penetration by liquid and air.

Regarding claims 22-24, the support layer (38) in Bloom is typically a plastic film, such as polyester. (Col. 8, lines 40-42.)

Regarding claim 29, Bloom discloses the durable layer has abrasion resistance. (Col. 9, lines 22-32.)

Regarding applicant claim 32, Bloom discloses that the donor web 30 comprises a transfer side which may also include a release layer (36) that facilitates release of the section (32b, 34b) of the transfer side from the carrier of the donor web (30). (Column 18, lines 30-46.)

Regarding applicant claim 33, Bloom discloses that the transfer side (32, 34) of the donor web (30) may comprise an adhesive layer (32) as an exterior layer which enhances the adherence of the section (32b) of the transfer side of the donor web (30) to the printed surface of the sheet (22). (Column 9, lines 4-26).

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Regarding applicant claims 34, Bloom discloses that the heating element (46) comprises a heated roller (Figure 7; Column 18, lines 47-60.)

5. Claims 7 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bloom in view of Hashida as applied to claims 1 and 5 above, and further in view of Nelson (US Patent No. 4,724,026).

Bloom in view of Hashida discloses the base as a roller (48) and thus does not include a die element or platen.

It would have been obvious to one of ordinary skill in the art at the time of invention to utilize a die element or platen in place of the roller base (48) of Bloom, because Nelson, which is also drawn to apparatus for the transfer lamination of a coating disposed upon a transfer sheet onto a target substrate via heat and pressure lamination, teaches that lamination bases comprising rollers or flat platens, i.e., dies, are functional expedients. (See Figures 4 and 7; column 4, line 26 to column 5, line 41).

6. Claims 21, 26, 27, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bloom in view of Hashida as applied to claims 1 and 20 above, and further in view of Spain et al. (US Patent No. 5,203,941).

Although Bloom in view of Hashida does not disclose the use of a barrier layer comprised of, for example, PVDF, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize such a material in the barrier (durable) layer 34 of Bloom, because Spain et al. disclose that the use of PVDF in the top coat, i.e., the durable layer, results in a film which is highly weatherable, i.e., resistant to environmental degradation. (Column 11, lines 4-28; Column 18, lines 42-66.)

Regarding claims 26 and 27, although Bloom in view of Hashida disclose a method for the transfer lamination of layer disposed on a carrier film onto a target substrate through heat and pressure lamination with a roller nip, they do not specifically disclose that

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the method further comprises a step of stamping (embossing) a textured pattern onto an exterior surface of the layer transfer laminated to the surface of the target substrate.

It would have been obvious to one of ordinary skill in the art at the time of invention to provide the heat roller (46) of Bloom with a surface texture such that, upon transfer lamination of the overcoat from the carrier film to the surface of the target substrate, a texture is embossed (stamped) into the exterior surface of the overcoat layer, because Spain, also drawn to apparatus for the transfer lamination of layer disposed on a carrier film onto a target substrate through heat and pressure lamination, discloses that is known increase the decorative effect of transferred coating upon the substrate by providing the upper lamination roller 20 with a textured surface whereby the embossing roller applies pressure to the transfer film to transfer the layer to the target substrate while embossing (stamping) three-dimensional indentations in the exterior of the coating transferred to the target substrate. (Figure 1; column 5, lines 30-34.)

Regarding claim 35, although Bloom is silent as to the surface of the sheet further comprising a layer which optimized the adherence of the transferable coating to facilitate release of the transferable coating from the release carrier of the donor web, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize coatings for enhancement of adherence, such as by primers, adhesives and/or by the chemical/physical treatment of the printed transparency, motivated by the fact that the skilled artisan would have appreciated that incompatibilities between materials, if not rectified by surface treatment or coating, would result in cracking, wrinkling, bubbling, and delamination.

7. Claims 25 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bloom in view of Hashida as applied to claim 1 above, and further in view of Cahill et al. (US Patent No. 5,397,634).

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Bloom in view of Hashida does not disclose the particulars of the transfer side of the donor web (30) as set forth in applicant claims 25 and 28.

Cahill, however, also drawn to methods for the disposal of transferable protective cover layers, disclose a transfer element (donor web) for use in providing protective layers on imaged substrates. (Column 4, lines 58-65.) Cahill discloses that protective layer may have a textured surface, i.e., smooth and glossy or matte, imparted (applied) to its exterior surface by the carrier sheet which, in effect, stamps its surface profile into the surface of the protective layer (column 3, lines 29-30; column 4, lines 1-14).

It would have been obvious to one of ordinary skill in the art at the time of invention to utilize the textured transfer element (donor web) taught by Cahill in the method disclosed by Bloom in view of Hashida motivated by the fact that both Cahill and the references combined above disclose that such transfer elements are useful in manufacturing abrasion resistant printed substrates protected from environmental and ambient effects which degrade the image. (Column 4, lines 58-65.)

8. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bloom in view of Hashida as applied to claim 1 above, and further in view of Gordon et al. (US Patent No. 5,486,397).

Bloom in view of Hashida does not discuss attributes of the adhesive layer (32).

Gordon teaches that the adhesive layer (32) of the transfer side (32, 33, 34) improves durability and quality of the printed image on the transparency by optimizing the adhering of the section of the transfer side 32b,33b to the surface of the printed transparency 10b. (Figure 5; Column 9, lines 4-26.)

It would have been obvious to one having ordinary skill in the art at the time the invention was made based on the teachings of Gordon, to use the adhesive layer (32) in Bloom in view of Hashida to help improve the durability and quality of the printed image,

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because an artisan would be motivated to look at Gordon for a teaching to improve Bloom as they are in the same area of art.

9. Claims 31 and 38-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bloom in view of Hashida as applied to claims 1 and 22 above, and further in view of Higgins (US Patent No. 5,932,352).

Bloom in view of Hashida does not disclose the use of a donor web having a carrier whose outer surface is covered with a lubricant layer.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the exterior surface of the carrier layer of the donor web with a lubricating or release layer motivated by the fact that Higgins, drawn to carrier and release film construction, discloses that it is known to dispose a second release or lubricating layer on the exterior surface of a carrier film especially when the carrier is used in the formation of a thermal transfer film. (Figure 2; Column 8, lines 53-58; Column 9, lines 47-49).

Regarding claims 38-40, a donor web and method for its use for the protective overcoating of a sheet via thermal transfer lamination, they do not specifically disclose, the use of a donor web having a carrier whose outer surface is covered with a lubricant layer.

Response to Arguments

10. Applicant's arguments with respect to the claims have been considered but are moot in view of the new grounds of rejection.

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Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sue A. Purvis whose telephone number is (571) 272-1236. The examiner can normally be reached on Monday through Friday 9am to 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher A. Fiorilla can be reached on (571) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sue A. Purvis
Primary Examiner
Art Unit 1734

SP
May 16, 2005